A great deal of research has focused on the identification of who an entrepreneur is in terms of psychological characteristics, personality, and other background information. Wortman (1986) provided a major review of the variables which have been examined. Questions have been asked concerning whether the entrepreneur is different from the general population or from managers of large organizations. At issue seems to be whether these personal factors drive a person to engage in entrepreneurial activity. The line of reasoning appears to be that if entrepreneurial characteristics can be identified then it may be possible to identify those individuals who seem more likely to become entrepreneurs and/or identify those characteristics which might differentiate the probable successes from the probable non-successful. More recently, others, like Ward (1993) are looking at individual differences in terms of other aspects of entrepreneurship.
The individual remains an appropriate unit of analysis in entrepreneurship research because it is he/she who makes the decision about whether to undertake the creation of a new venture and it is his/her behavior which launches the firm. However, it is legitimate to ask what the purpose of identification of personal entrepreneurial characteristics is. The issue is not often (if ever) addressed directly by those who pursue the answer. Early research seemed to follow McClelland's (1961) ideas about the need for achievement being a primary drive in entrepreneurship and therefore, what other variables might have an influence on the decision. Gartner (1988) labelled this line of research the trait approach.

More recently, newer models described in a special series in *Entrepreneurship: Theory and Practice* (Volumes 17:1 and 17:2) have gone far beyond a trait approach to entrepreneurship. These models represent a dramatically higher level of sophistication, incorporating knowledge gained since the original inception of this paper. New horizons include the social network of the entrepreneur, entrepreneurship as a career choice, entrepreneurial intentions, perceived product demand, and economic decision making models. Much of this work supports the initial contention of this paper, that is, that entrepreneurship is a behavioral process which is the result of not only one's personality, but the interaction of a variety of contextual factors.

Prior to the complete dismissal of personality and prior to its cursory, minor inclusion in models of the entrepreneurial process, a more thorough discussion of personality must be presented. Only then can the role of personality be properly appreciated and understood. That discussion will also explain, to some extent, this author's belief in the theoretical viability of the current wave of new models. A brief discussion will be given of this new collective view of entrepreneurship in a later section of this paper.

Research on the subject of who is an entrepreneur and what is an entrepreneur has a parallel with research conducted in the decades prior to the 1980s in the field of leadership. Victor Vroom (1976) summarized the leadership situation regarding whether or not it is a unidimensional personality trait and whether or not there were significant differences between leaders and non-leaders. One conclusion he drew was that it was probably time to look beyond personal characteristics to understand what made people effective in leadership situations, though Vroom did indicate that there could be societal and organizational benefits from being able to identify who had bona fide leadership potential. Current leadership literature addresses the influences of the situation and leader behavior appropriate to that situation as important influences on effective leadership. Vroom's concluding comment on the influence of personality in leadership has relevance to the pursuit of understanding the potential relationship between entrepreneurship and personality.

“To summarize, the conception of leadership as a 'personality characteristic' proved to be oversimplified. The dream of a technology by which the relative amounts of leadership possessed by different people could be measured and the person with the largest amount of this trait selected as leader was unattainable since it rested on an erroneous foundation. The question, 'Who will be the best leader?' is akin to asking 'Which will be the best fishing bait?' Neither question can be adequately answered as stated.” (Vroom, 1976, p. 1530)

Perhaps similar comments will someday be made about the search for a relationship between personality and entrepreneurship.

There is sentiment that entrepreneurship researchers can benefit from the study of other fields. Sexton (1987) identified similarities between the evolution of older fields such as marketing, relatively new fields like strategic management, and the emerging field of entrepreneurship. To advance our understanding of many important questions in entrepreneurship, he suggests utilizing the experience and relevant methods and instruments of other academic fields of research. “What is needed is the transfer of up-to-date research findings from other areas which in turn can contribute to the development of paradigms and constructs which lead to the development of convergent theories.” (p. 27) Comments and insights from authors like Vroom (1976) illustrate the potential Sexton envisioned.

One such landmark work from the field of organizational behavior is the work of Campbell, Dunnette, Lawler and Weick (1970). Their study offers insight into the problem of the moment in this paper. Their premise was that managerial talent was predicted to be a rare but valuable commodity in the decades to come and whatever could be done to improve the existing pool of talent and aid in the identification of promising candidates was worthy of investigation. Their initial pondering of the issue at hand led them to comment,
"Our questions divide conveniently into three groups having to do, respectively, with the person, the process, and the product. What sort of persons are effective managers? What is the process of effective managing? What are the products of effective management? (Campbell, et al., 1970, p. 7). Changing a few words in those questions, as Gartner (1988) did with Mintzberg's (1973) work, they would be highly applicable to entrepreneurship research and read as follows: "What sorts of persons are effective entrepreneurs? What is the process of effective entrepreneurship? What are the products of effective entrepreneurship?"

Throughout their work, Campbell, et al., argued that effective managerial behavior develops from the interaction of a manager's personal traits, the demands of the situation, and the educational feedback, and reward systems of the environment they operate within. Figure 1 presents the model of managerial effectiveness proposed by Campbell, et al., (1970). Current research trends into the causes of entrepreneurship are discussed in later sections of this paper and are leading to the development of strikingly similar models.

In sum, the purpose of this paper is to discuss the relative influence of personal factors on an individual's decision to pursue an entrepreneurial career. This paper does not discuss the merits, pro and con, of whether entrepreneurs are high achievers or other such personal variables, as indicated, that debate has several players already. The primary focus is to place the possible relationship between entrepreneurship and personality traits into their proper perspective as one of several interacting causes of entrepreneurship. The question of whether or not entrepreneurship is a trait in and of itself or a collection of traits will be briefly discussed. Emerging and suggested directions for entrepreneurial research will also be addressed.

DEFINITION OF TERMS

For clarity the term "entrepreneur" should be defined, remembering that the purpose of this paper is not to debate the definition, but rather why one becomes one. (If that is viewed as avoiding the issue, I apologize; however, it is a potential quagmire which is really outside the scope of this paper.) Brockhaus (1987) and Gartner (1988) gave short and simple definitions of an entrepreneur. Brockhaus stated "anyone who starts a business is an entrepreneur." (p. 2) while Gartner (1988) stated "entrepreneurship is the creation of new organizations." (p. 26) If Gartner is correct, then an entrepreneur is someone who creates a new organization. While there may be questions these definitions raise, persons who start new organizations are viewed as entrepreneurs in the context of this paper. The type of organization they create, whether it be a rapid growth firm or a Mom and Pop firm is relevant only if it is believed that the builders of these two types of organizations differ.

It is also necessary to define personality. Personality, which will be discussed at greater length in the next section, is assumed to be an influence of human behavior and may roughly be defined as a person's predisposition to behave in a certain way. An individual's personality is seen as a multi-dimensional phenomenon composed of a large array of traits or characteristics. Gough (1976) commented:
"...Personality is not a thing or tangible object to be defined and identified, but rather an inference or abstraction that calls to mind the individuality, adaptability, and characteristic dispositions of the human organism... Although personality is largely a differentiating concept, there are dimensions and facets that are present in varying degrees in everyone, and that can be identified and measured." (p. 578)

**Personality**

The concept of personality has been a topic of discussion for literally thousands of years. Gough (1976) cites the hypotheses of Hippocrates (460-357 B.C.), a pioneer in the study of medicine, as evidence of the age of the inquiry into personality-related questions. Gough also cites Galen (130-200 A.D.) as having formulated probably the first typology of personality, based on the work of Hippocrates. More recent work in the area emerged in the latter half of the nineteenth century. Into the twentieth century personality continues to engage the energy and interest of academicians and practitioners.

Gough’s (1976) discussion of personality identifies many issues of concern which have relevance to this paper. Without a more thorough understanding of what personality is and how it effects an individual’s behavior, it is pointless to wonder whether or not there is an “entrepreneurial personality.” Gough addresses four questions regarding the study of personality, all of which are relevant to the study of the relationship between personality and entrepreneurial behavior.

First, personality as a concept must be defined. For personality researchers this has been as difficult as defining an entrepreneur has been in this field of study. For example, the question of what is “personality” drew a 31 page response from Gordon Allport (1937) before he proposed the following definition, “personality is the dynamic organization within an individual of those psychophysical systems that determine his unique adjustments to his environment.” (p. 48) This definition stresses the individuality of one’s personality, it’s ability to adapt to internal and external demands, and the interactive nature of internal and external forces. Gough indicates that later researchers have alternatively accepted this definition, modified it for their purposes, or continued to supply new definitions of their own. (Definitions of entrepreneurship have a similar experience.) Regardless, there appear to be components of Allport’s definition of personality which make the concept worthy of inquiry as a possible cause of entrepreneurial behavior.

A second question for personality theorists involves the relation between personality and behavior. Does personality influence behavior and, if so, in what directions and through what mechanisms? This has been the subject of considerable theorizing and research in numerous fields and has considerable relevance in the study of entrepreneurship.

In the field of Organizational Behavior there have emerged several major theories, collectively known as content theories, which involve the explanation of behavior through the use of the personality or psychological characteristics of the individual. Henry Murray (1938), Abraham Maslow (1954, 1968), David McClelland (1961), and Clayton Alderfer (1969), are among the contributors to this line of reasoning. While their theories differ, all content theorists posit that a person is driven to engage in behavior that is aimed at satisfying some manner of need.

Gough’s third major question about the study of personality deals with the structural nature of personality. Eysenck (1947), Eysenck and Eysenck (1963), and Cattell (1946, 1950) have been major contributors to this field of study. The questions revolve around whether or not there are major dimensions of personality which collectively give an individual’s personality a structure. Major dimensions which have been identified stable-unstable, introversion-extraversion, and normal-neurotic. Gough comments “Trait psychology leads easily to type psychology, in which salient and recurring dispositions are grouped together and mnemonically labeled. Thus an ‘introvert’ viewed as a kind of person—may be characterized by traits or persistence, rigidity, autonomic nervous imbalance, and innumerable typifying habitual responses.” (Gough, p. 576) If it is true that people have personality types then it is reasonable to wonder whether or not there is an “entrepreneurial” personality type, what characterizations can be made of that “type” and what kind of behavior does an “entrepreneurial” type of person exhibit? This may explain why some people seem to be “habitual entrepreneurs.”

Gough’s final question about the role of personality as a behavioral influence considers the issue of directionality or the aim of behavior. How do personality traits influence behavior? Do they always push (pull) in the same direction? Do they act in isolation or in conjunction...
with one another? To what extent are traits influenced by elements of one's environment insofar as how a person reacts to identical or highly similar events or cues? For researchers in entrepreneurship, these questions concern the relation between personality and entrepreneurial behavior and certainly have research implications for the study of entrepreneurship.

Potkay and Allen (1986) provide additional insight into the study of personality. They addressed a hierarchy of personality-related terms which is useful in the study of the entrepreneurial personality. First, traits are characteristics which are internal to the person and possess corresponding behaviors. Second, people possess traits in various combinations and a combination of traits is known as a personality profile. Finally, a type is a category of individuals who share a number of traits or characteristics.

Potkay and Allen (1986) agree with Gough (1976) that personality is for the most part inferred. All traits possess a behavioral dimension or component. What we see is the behavioral manifestation, result, of someone's personality. In the case of entrepreneurs, we infer that someone has an entrepreneurial personality when the individual is observed behaving in an entrepreneurial manner, that is, starting a firm. In studying the relationship between personality and behavior "only behaviors falling at the extremes of dimensions have much meaning for personality; degrees near the middle of dimensions are too ambiguous to allow inferences in which one can be confident" (Potkay & Allen, 1986, p. 7). While it may be easy to say one person is "highly entrepreneurial" because he/she has started several firms, people more toward the center of the continuum might be less easily recognizable.

The study of the psychology of the entrepreneur has pursued the possible development of an entrepreneurial type. Psychologists have provided the terminology and methods to work with. It is a question of determining whether or not such a type exists, that is, is there enough similarity across entrepreneurs to identify a type, if a type exists, how does it influence someone, and how will that knowledge help us?

**PERSONALITY AND BEHAVIOR**

Psychologists themselves are in disagreement about the role of personality traits in behavior. At one end of the spectrum is the personality-based camp asserting the importance of traits in determining how a person behaves. At the other end is the situationist camp which tends to minimize the role of the individual and stresses the role of one's environment. Perhaps in the middle, or perhaps as a compromise, stands the interactionist camp which claims that an interaction takes place between the environment and the person to determine behavior.

Endler (1983) presented two versions of an interactionist view of behavior (See Figure 2). Endler termed the simpler of the two models a "mechanistic model" of interaction. It simply portrayed behavior as the result of an interaction between the person and the situation. Endler's more complex model identified a dual interaction which involved the behavior itself as well. In this model the behavior which resulted from the first interaction then influenced both the individual and the person's perception of the situation. This would, in turn, modify the person's reaction to the next incidence of a similar situation. This model might explain the "repeat" entrepreneur who, after a failed experience, will pick him/herself up and try again,
hoping to be successful the next time because of learning which took place during the first failure. Figure 3 presents a modified version of Endler's conceptualization as applied to entrepreneurial behavior.

Potkay and Allen (1986) comment that the underlying assumption of the trait approach (i.e., that on a given behavioral dimension a person will behave consistently from one situation to another, even when the situations are quite different) has not been strongly supported in recent research. In discussing the relative merits of trait theory and interactionism, they conclude:

"Interactionism, however, appears to be the general position that offers the most power for understanding whole, complex human beings..." (p. 439).

Given the above discussion, much of current entrepreneurship literature seems to be in the interactionism camp.

Determining the role of personality in entrepreneurship necessitates personality assessment. There is ample precedent for the use of personality assessment in business and industry. Large firms, such as AT&T (Bray, 1974) have developed and implemented assessment programs for the purposes of selection and managerial training and development programs. There is also an ample supply of assessment inventories and scales available for this purpose. (See Anastasi, 1976 or Buros, 1985) If personality assessment has been useful in business, there is no reason not to believe that it may be a factor in an individual's decision to start a business. What is not clear, however, is how important it is and how influential it is in the entrepreneurial process.

Prior to basing research on any psychological instruments, researchers must investigate the psychometric properties of the instruments, that is, predictive validity, construct validity, and reliability. It is also important that theory-based research be the rule if we are to truly make progress in answering questions about the role of personality in the entrepreneurship process.

Summary-Personality Theory

The above discussion focuses on illustrating the reasons why personality and psychological characteristics might be involved in the entrepreneurial process from a psychologist's perspective. If, as psychologists indicate, personality is a motivator of behavior, then entrepreneurship, which is highly behavioral, can certainly be motivated by one's personality and psychological characteristics. This position is certainly intuitively attractive. The questions remains, which elements of one's personality are important and how?

It should also be noted that there are really three identifiable stages of the entrepreneurial process in which these characteristics might be influential and possibly in different ways, though it is beyond the scope of this paper to discuss possible differences (See Figure 4). Stage 1 is the actual decision to start a new business. Stage 2 is the process one engages in when attempting to put all the pieces together, that is, the startup phase. Stage 3 involves the running of the ongoing business one has created. It is likely, as Churchill (1983) found, that some variables which had been useful in the startup phase of entrepreneurship were dysfunctional during the later running of the enterprise.
As stated earlier, the relationship between personality and entrepreneurship has been the focus of a substantial amount of research, and several reviews (Wortman, 1986; Brockhaus, 1982; Brockhaus & Horwitz, 1986) and debates (Carland, Hoy, Boulton, & Carland, 1984; Gartner, 1985; Carland, Hoy, & Carland, 1988; Gartner, 1988). Most reviews have attempted to draw conclusions about what personality variables characterize entrepreneurs and whether or not these characteristics differentiate entrepreneurs from non-entrepreneurs and/or successful managers in large businesses. Wortman (1986) focused on the topics of the previous research in order to develop a typology for future research but refrained from drawing specific conclusions about the results of the prior research. The most frequently researched personal traits include the need for achievement, risk taking propensity, and locus of control.

Figure 4. Personal Characteristics and the Three Stages of Entrepreneurial Activity

Entrepreneurship Research

Gartner (1985) noted the breadth of descriptions used in the past to describe entrepreneurs (see Figure 1). He concluded "the entrepreneur is overwhelmingly perceived to be different in important ways from the non-entrepreneur, and many researchers have believed these differences lie in the background and personality of the entrepreneur." (p. 699) He noted the lack of consistent results in this line of research and the controversies concerning the ability of past methodologies to clearly identify the entrepreneurial personality.

Gartner's later review (1988) surveyed the results of 32 papers on the identification of entrepreneurial characteristics. The papers reviewed (both empirical and non-empirical) focused most frequently on achievement motivation (11 citations), education (8 citations), age (5 citations), and risk taking (4 citations). He concluded that given the wide variety of traits which have been identified as entrepreneurial, the assembled profile of an entrepreneur would portray someone "larger than life, full of contradictions, and conversely, someone so full of traits the (s)he would have to be a sort of generic 'everyman'." (p. 21) Gartner indicated one problem with the research is the lack of homogeneity.
within the samples in the various studies. As a result, Gartner proposed focusing future research on entrepreneurial behaviors, for example, the common behavioral patterns exhibited by successful entrepreneurs, rather than the psychology of the individual. Since it has already been pointed out that personality is likely to be only one of many influences on individual behavior, Gartner’s proposal is one which should be given thoughtful consideration.

Gartner suggested that the study of who the entrepreneur is, though important, is one step removed from the study of the real issue at hand, that is, the “primary phenomenon of entrepreneurship”, the creation of new organizations. He stated: “The behavioral approach challenges us to develop research questions, methodologies and techniques that will do justice to the complexity of entrepreneurship (Gartner, 1985). The creation of an organization is a very complicated and intricate process, influenced by many factors and influencing us even as we look into it (added—reminiscent of Endler’s second model). The entrepreneur is not a fixed state of existence, rather entrepreneurship is a role that individuals undertake to create organizations” (Gartner, 1988, p. 28).

Carland, Hoy, and Carland (1988) objected to Gartner’s (1988) dismissal of the importance of personality differences in entrepreneurship. They stated that a review of the psychological literature “leads to the inescapable conclusion that personality, however it is defined, has a marked influence on education, career, marriage—all aspects of life… Any attempt to isolate what people do from what they are is an attempt to separate the dancer from the dance.” (p. 37) They concluded that both the behavioral and trait approaches to the study of entrepreneurship are necessary to reach a greater understanding of the field.

Brockhaus has made considerable efforts toward understanding the role of personality in entrepreneurship. (Brockhaus & Nord, 1979; Brockhaus, 1980; Brockhaus, 1982; Brockhaus & Horwitz, 1986; & Brockhaus, 1987) Brockhaus & Horwitz, (1986) concluded that there are few psychological characteristics that distinguish entrepreneurs from business managers, whether the focus is on traits related to starting a business or those related to the successful operation of the firm once it is underway. Brockhaus and Horwitz agreed with previous researchers that locus of control, risk taking propensity, and achievement motivation are important influences in the entrepreneurial decision, however, they also concluded that the decision to start a business is influenced by additional factors such as the existence of role models and previous job satisfaction.

In his 1987 review, Brockhaus again concluded, on the basis of his own research and that of others, that risk taking might not be as strong a differentiating factor as once thought. “This failure to distinguish between the risk-taking propensity of entrepreneurs from that of the general population appears to be a major deviation from the widely held theory that entrepreneurs are moderate risk-takers.” (p. 3) Brockhaus is also among those who have questioned the quality of research samples and instruments which have been used to develop our knowledge of entrepreneurs.

Beyond the reviews and other citations above, there continued to be a stream of research activity in the late 1980s which sought to identify the entrepreneur in some type of individually descriptive terms. As a partial update of Wortman’s (1986) review, the following discussion highlights examples from the various editions of the *Frontiers of Entrepreneurship Research* as well as papers from recent small business and entrepreneurship journals.

Peacock (1986) found no significant differences between successful and unsuccessful business owners on measures of risk taking and mental ability for small groups of New Jersey entrepreneurs. Begley and Boyd (1986) compared a large sample (N = 239) of owners who were either founders or non-founders. The founders scored higher on risk taking propensity, the need for achievement, and tolerance of ambiguity than non-founders. They found no differences on measures of locus of control nor Type A stress behavioral tendencies.

Sexton and Bowman-Upton (1986) tested an instrument of their own development, based on the Jackson Personality Inventory and the Personality Research Form-E developed by psychologist Douglas Jackson. Their instrument included scales on conformity, energy level, interpersonal affect, risk taking, social adroitness, autonomy, change, harm avoidance, and succorance. Sexton and Bowman-Upton used females in the following categories: entrepreneurship majors (N = 54), non-entrepreneurship business majors (N = 73), managers (N = 96), and entrepreneurs (N = 105). They reported finding differences between the groups of college students on all nine scales. On five of the nine measures there were strong similarities between the entrepreneurs and the entrepreneurship majors and four significant (p < .05) similarities between business students and business managers. Most importantly, practicing entrepreneurs were
found to be lower in conformity and higher in energy level, risk taking, and autonomy than business managers. The authors concluded that they had identified a number of characteristics which were unique to the entrepreneur.

Hills and Welsch (1986) tested nearly 2,000 business students about their entrepreneurial intentions, personal independence, and interest in entrepreneurial coursework. The results indicated significant correlations (p < .0001) between entrepreneurial intentions, attitudes toward entrepreneurs, perceptions of entrepreneurs, and a composite measure of independence. The intentions measures were found to be related to some measures which have been shown to be related to actual startups, such as family entrepreneurs.

Neider (1987) found female entrepreneurs (N = 52) to be very high in need for achievement, autonomy, and dominance, with high energy levels and persistence. Comparing her results to the results of others, Neider concluded that males and female entrepreneurs are probably motivated by similar needs and behave in “remarkably similar ways.” (p. 28) Though the sexes may be similar in need structure and behavior, Neider found some differences in how they reach the status of entrepreneur.

In another study of female entrepreneurship Scott (1986) found that women entrepreneurs (N = 154) were more educated than the average female, however, relatively few have the types of education normally deemed appropriate for entrepreneurs, that is, engineering or business administration. She found women depended on the business for their sole source of income in much the same manner as men, but that women may have different priorities in running the firm. For example, Scott commented:

“...Being the boss’ may be less important to women than to men, and the ‘challenge of entrepreneurship’ may be more important.” (p. 43)

Fagenson and Coleman (1987) compared male (N = 44) and female (N = 66) entrepreneurs on Rokeach's value instrument and concluded they “are more alike than different.” (p. 203) Hartley (1987) (no N reported) found there were some differences in risk orientation between entrepreneurs, large firm executives, and business teachers-consultants. Greenberger and Sexton (1987) concluded that a component of locus of control, the desire for personal control, was strongly related to the anticipation of new venture startup among 242 students and was also higher for entrepreneurs than for practicing managers (N = 51).

Knight (1987) took a slightly different approach to studying why people had started their own firms, he asked them! The responses indicated the principle reasons for starting their own businesses (N = 231 graduates of the University of Western Ontario Business School) were a desire to be their own boss, to build something of their own, and a frustration with the corporate environment. Since data were not provided on any personality measures, it is not known whether these individuals would differ from non-entrepreneurial graduates, however, from a psychological perspective one could speculate that there would be differences if, as posited earlier, personality is a behavioral influence.

Given the results and opinions of researchers, reviewers, and others in the field, several conclusions seem likely or unlikely. First, there seems to be an emerging consensus that successful entrepreneurs are different from unsuccessful ones, and that entrepreneurs are different from the population in general (Brockhaus & Horwitz, 1986). Additional studies reviewed here confirm that as well as indicate that entrepreneurs are different from practicing managers. The meaning of the differences and how influential they are in the startup process is yet unclear. Second, if entrepreneurship is part of a person's psychological profile, it is likely to be a combination of traits, some of which have already been measured (e.g., risk taking propensity, locus of control, energy level, and need for achievement) and others that have not been measured to date. Third, given the results to date and the methodologies which have been employed, it is likely that the causes behind the entrepreneurial decision and event are multiple but that personality undoubtedly has some influence.

Other Person-Based Influences on Entrepreneurship

Who we are is more than a collection of personality traits such as the need for achievement or locus of control. We are a collection of capacities, skills, abilities, and limitations. We possess value systems, preferences and tolerance levels. We also possess experiential and physical differences which shape our personalities (Allport, 1937). At the same time the interactionist perspective tells us that what we do is the result of more than our personality alone (Endler,
Researchers in entrepreneurship must recognize the importance of non-personality differences between individuals and incorporate these differences into models of individual entry into entrepreneurship.

Some factors of an individual's background may be uncontrollable while some may have actually been consciously structured (controlled) by the individual as part of a plan to provide him/her with a background which is more appropriate for the successful initiation of a new venture. Controllable factors would include one's education and previous business experience. The existence of controllable factors may suggest that the entrepreneurial event or career was more planned than random or accidental. They may, as a result of their existence, present more new business opportunities to the individual (such as having worked in an entrepreneurial firm in an emerging industry) and/or give the individual greater skill with which to be able to recognize, evaluate, and capitalize on new opportunities.

Uncontrollable personal factors would include sex, age, and birth order. Carland, et. al. (1984) made reference to this type of factor, though they eliminated it from their review saying demographics "have been excluded from the present conceptualization because of the inability of the prospective entrepreneur to alter those variables in order to increase his/her probability of success." (p. 355) Gartner's (1988) review also found numerous studies which measured factors like age, education, and family background. While this type of factor may be uncontrollable the influence of such factors like birth order may provide the basis for differences whose influence is undeniable.

An examination of the general nature of the task of starting a business suggests that still other personal factors may be useful. When starting a firm is understood as an ambiguous, time consuming, demanding, emotionally draining, and frustrating task, it will also be understood to require the capacities to persevere, deal with frustration and rejection, perceive and evaluate information, and communication ideas and information to others. The business formation process also requires a great number of decisions, thus a person's decision making skill, capacity, and willingness or propensity are important. The shear physical demands of the task make important a person's energy level, ability to exist on abnormal amounts of sleep for extended lengths of time, and the ability to work long hours on a prolonged daily basis. These capacities and skills are not personality characteristics of an individual but they nonetheless must be present in some quantity to carry the entrepreneur through the process. It, too, argues for the behavioral approach to understanding entrepreneurship advocated by Gartner (1988).

Cooper and Dunkelberg (1987) conducted a massive study of entrepreneurs and drew several relevant conclusions. They found that in some ways entrepreneurs are different from the general population in terms of non-personality based dimensions, for example, they are more likely to come from families with one or more entrepreneurs and they are likely to have higher levels of education. In some ways entrepreneurs were found to be less different from the general population than previously believed, that is, they are not more likely to be of foreign stock nor to have left school at an early age. While Cooper and Dunkelberg identified some central tendencies they found many exceptions as well. Their findings seem to support Gartner's (1985) conclusion about the variety of traits which can be used to describe entrepreneurs.

Non-Person Influences on Entrepreneurship

Not all individuals with the "right" entrepreneurial personality, assuming there is one, end up starting their own firm. It is logical to assume as well, that there are many individuals without the "entrepreneurial personality" who do start firms. This again leads one to the conclusion that personality is but one of many factors that motivate one to start a business.

Remember that personality psychologists have defined personality in terms of a person's response ("unique adjustments", Allport, 1937) to his or her environment. This being the case, if entrepreneurship is a personality characteristic (or even if it is not), it seems clear that the starting of a business by an individual is a response to his/her environment. The question which then must be asked concerns which factors of an individual's environment are those to which he/she is responding when the decision to start is made and in what manner do they influence someone.

Shapero (1984) purposely avoided the discussion of the psychology of the entrepreneur, commenting "The more I study entrepreneurs, the more I am impressed by the great variety of kinds of people who are entrepreneurs, and the more I find it difficult to be satisfied with
simple psychological profiles.” (p. 28) Shapero argued for the importance of the non-psychological factors in the environment in one's decision to become an entrepreneur. “Entrepreneurs are not born, they are developed. The great majority of people are capable of being made more entrepreneurial.” (p. 28)

Shapero chose to focus on the "entrepreneurial event" rather than the entrepreneur. He argued that this approach avoided having to wade through the discussion of who is and who isn't an entrepreneur (something avoided in this paper as well). To Shapero, this focus allows researchers to view the entrepreneurial event as the dependent outcome variable and other situational variables to become the independent variables.

Shapero (1984) recognized the importance of the environment in an entrepreneurial decision. As support he cited a dissertation study by Hoffman (1972) which demonstrated that in different locations people had differing perceptions about identical investment opportunities and differing propensities to act on those opportunities. Two environmental factors studied were the general community outlook on risk taking and the financial and economic climate of the community. Other aspects discussed by Shapero included societal biases toward or against entrepreneurship, educational opportunities, general academic values, and the political and economic climate of society.

In the 1980s Gartner (1985) and Greenberger and Sexton (1988) proposed models on the nature of new venture creation. Both models highlight the impact of situational variables on the entrepreneur's decision to start the business. Gartner (1985) reviewed 16 studies (empirical and non-empirical) and concluded that the environment contains a variety of factors which will influence new venture creation. Both authors also readily acknowledge the role of the individual as an important factor. Both models follow the line of reasoning that the decision is the result of the interaction of many factors, not the least of which is the individual. Both models follow the interactionist approach to explaining the influence of personality on behavior described earlier and deserve rigorous testing.

Learned (1992) and Herron and Sapienza (1992) presented models in the recent *Entrepreneurship: Theory and Practice* series which parallel suggestions and observations made in this paper. Both models represent an interactionist approach. Learned included "sense making" and discussed information processing. Herron and Sapienza acknowledged the role of personality in influencing behavior. To some extent, these models infer the existence of controllable factors discussed earlier as well. These models, while more elaborate than the Gartner (1985) or Greenberger and Sexton (1988) models or any inferred in this paper, deserve careful attention.

To summarize, a long list of factors can be developed to identify those situational characteristics which can influence an individual's decision to start a business. Some have been previously researched and found to be considerations while others have not. This list would include the following factors:

1. The presence of an idea.
2. Dissatisfaction with one's current job. (Brockhaus, 1980)
3. The availability of accessible funds. (Shapero, 1984)
4. Societal attitudes toward business. (Shapero, 1984)
5. Societal attitudes toward starting a business. (Shapero, 1984)
6. Societal attitudes toward this particular type of business.
7. The existence of role models (Brockhaus & Horwitz, 1986)
8. The existence of support mechanisms, such as SBDCs and incubators (Fry, 1987)
10. The economic climate of the market. (Shapero, 1984)
11. The individual's family status. (Brockhaus & Nord, 1979)
12. The existence and success of similar businesses.
13. The availability of information to research and evaluate an idea.
14. The individual's employment status.
15. The existence of opportunities to learn more about starting one's own business.
16. One's estimate of the probability of success.

Each prospective entrepreneur will most likely have a different system of combining and evaluating these factors. Each factor will likely have its own weight and importance to the prospective entrepreneur. Understanding that system and how entrepreneurs make an entrepreneurial decision will probably be a fruitful avenue for future research into the causes of entrepreneurship.
New Directions for Entrepreneurship Research

The purpose of this paper is not to settle the argument of whether or not certain personality characteristics and individual differences are related to entrepreneurship. It is doubtful that that issue will ever be completely settled in the minds of all involved. What is important is discussing issues which, when studied in full, will give a better understanding of the total entrepreneurial process. That process is highly behavioral and personality, as a cause of behavior, is undoubtedly a part. However, we must understand and accept that personality is probably only a part and that it likely works in conjunction with other factors rather than in isolation.

Several points of view have begun to emerge which dovetail neatly with a person-oriented theory of entrepreneurship. The opening discussion of the psychologist’s view of personality (Gough, 1976; Endleq, 1983; and Potkay & Allen, 1986) highlighted a diversity in the belief about the relationship between personality and behavior. This section will illustrate several promising directions that research can take in order to arrive at a more complete model of entrepreneurship. Among them are social networking theory, role theory, a behavioral approach to entrepreneurship, and entrepreneurial intentions.

Gartner (1988) suggested that entrepreneurship is a role that one undertakes to enable an organization to come into existence. If entrepreneurship is a role, does it end; does one cease to be an entrepreneur when the venture opens? If, as Gartner has suggested, entrepreneurship is the creation of organizations, does one cease to be an entrepreneur when one no longer is actively engaged in the starting of a business? Is one no longer an entrepreneur when he/she has left the firm which was started? How do people move into and out of the role of entrepreneur? With answers to these and similar questions, role theory may provide insight into the understanding of the dynamics of entrepreneurship.

Roles imply behaviors. If entrepreneurship is behavioral, then what behaviors do entrepreneurs exhibit? This knowledge may assist more in the training of individuals to be better entrepreneurs and more entrepreneurial than anything learned by identifying the personality traits that entrepreneurs do or do not possess. Van de Ven (1980), Shapero (1984) and Carsrud and Johnson (1987), in addition to Gartner (1988), support the behavioral notion of entrepreneurship.

With regard to locus of control and high energy levels exhibited by entrepreneurs Shapero concluded “Many of these characteristics, however, are learned behaviors.” (p. 28) Carsrud and Johnson concluded that there must be entrepreneurial behaviors for entrepreneurship to exist.

Gartner also suggested that the study of entrepreneurship might benefit from following the same research path as Mintzberg (1973) in his classic study of managerial roles by studying what entrepreneurs actually do in the process of starting businesses. Mintzberg got away from the traditional definitions of managerial functions being “planning, organizing, directing, and controlling” and tried to identify what managers actually do. By identifying a collection of ten roles as the reality of a manager’s job, Mintzberg described the manager’s job as a gestalt, a psychological term meaning that an entity is a unified whole whose parts cannot be considered in isolation. (Mintzberg, 1971, p. 20) He then concluded “The ultimate solution to the problem—to the overburdened manager seeking help—must derive from research. We must observe, describe, and understand the real work of managing; then and only then shall we significantly improve it.” (p. 27) It seems apparent that understanding the process of entrepreneurship can benefit from the same thoughtful analysis. Gartner’s (1988) suggestion is that analysis of this sort will provide better insight into what entrepreneurs “really do”, thus clarifying the role of the entrepreneur.

Finally, regarding a behavioral approach to the study of entrepreneurship, researchers would do well to incorporate more from other fields of study, such as psychology, sociology, and organizational behavior, about the causes of behavior. One particular theory which has not been utilized is Henry Murray’s (1938) Need Press or Manifest Needs Theory. Murray postulated that needs will not be motivational until the individual recognizes an opportunity to satisfy them; thus needs are latent until that time. It is possible that if there are entrepreneurial-type needs in all or most of us, then perhaps we all have various thresholds of recognition. That is, some may recognize and enact entrepreneurial behavior at lower thresholds than others. Research into the information processing skills and thresholds of recognition of entrepreneurs may provide valuable insight into the process of entrepreneurship.

There are also others who are suggesting new influences on the entrepreneurial process aside from those mentioned already in this
Bird (1988) departs from the traditional investigation of personality traits and entrepreneurial characteristics. She has developed a model which outlines the role of entrepreneurial intentions on the formation of new business ventures. Her model addresses the nature of the relationship between intentions and actions while also addressing the development of the intentions themselves.

Gasse (1986) discussed the role of beliefs and one's cognitive orientations in entrepreneurship. Gasse argued for the importance of recognizing that the direction a new venture takes is a function of the environment the entrepreneur is attempting to adapt to and the entrepreneur's "beliefs, values, and attitudes...about certain aspects of his functions, his enterprise, and the environment." (p. 50) Gasse then outlined ten different categories of beliefs an entrepreneur might have about various aspects of the operation of a business.

Carsrud and Johnson (1987) and Aldrich and Zimmer (1986) have proposed the notion of the importance of social network theory and entrepreneurship. They contend that entrepreneurs exist in a social contest and one factor which may influence their ability to succeed and to even get started may be their position in various networks which are supportive of entrepreneurship. Carsrud and Johnson found some support for this line of research. As people such as Shapero (1984) suggest the importance of an entrepreneur's environment, there are all manner of aspects of an environment, as listed earlier, which can be studied.

It might also be time to heed the recommendations of those who criticize existing research methodologies, such as Brockhaus (1987) and Carsrud and Johnson (1987). If the instruments that have been used, Rotter's Locus of Control instrument and the Kogan-Wallace CDQ risk taking measure are of questionable utility for this purpose, they may be more of a cause of the problem rather than a solution. Perhaps researchers would do well to find newer methods which are available, as suggested by Carsrud and Johnson (1987). Another direction would be to attempt the development of tools designed especially for the identification of entrepreneurial tendencies. Inconsistent results may be caused by the use of tools which were not developed for the purpose of identifying entrepreneurial tendencies.

It may be that we are trying to fit square pegs into round holes. All the while we are saying that entrepreneurs are different we are using the same old methods. A problem associated with this suggestion is the time needed in the development process. New instruments need to demonstrate construct and predictive validity and reliability. This necessitates testing through factor analysis and the use of large samples. The process may be time consuming but the benefits to the field may be well worth the effort.

Several methodological considerations should be dealt with as well. Gartner (1988) has criticized the types of samples which have been used to conduct research. Brockhaus (1987) and others have noted problems associated with the use of different definitions of both entrepreneur and entrepreneurship. A third issue is the need for more longitudinal studies to learn more about the causal nature of hypothesized variables. More studies of failure are needed also. Finally, studies which take into account industry differences, as suggested by Cooper and Dunkelberg (1987), will be helpful.

Conclusion

Psychologists themselves are still debating the role of situations, personalities, and their interaction in influencing behavior. The interactionist approach indicates there will not be perfect behavioral consistency across all situations but that it is possible that different characteristics can produce similar behavior in the same situations and similar characteristics will produce different behavior in different situations. Researchers in the area of personality and entrepreneurship should be encouraged by the wealth of their findings to date, especially given the methodological considerations mentioned here and elsewhere. Focus should be given to those areas where consistent findings emerge.

The field of entrepreneurship seems to be following a path similar to that of the field of leadership in the 1960s and 1970s (Van de Ven, 1980). During that time leadership study moved away from a trait approach toward a contingency view that recognized a leader's effectiveness is dependent upon his/her ability to apply or exhibit the behavior or style which is appropriate to the particular situation. This view is now widely accepted in the field. Leadership theorists recognized that effective leadership is a mix of behaviors, not simply a function of "who" (or "what") the leader is. Researchers in entrepreneurship should think about the development of new models which view the decision to start a business as contingent upon many factors. New models have been proposed which now identify the


